

**WHAT IS CLAIMED IS:**

1. An optical disc apparatus in which a laser beam from an optical pickup is shone onto a recording surface of an optical disc, and information is read from the optical disc, comprising:

a servo constant changing section, which successively changes a servo constant;

a jitter measurement section, which measures a jitter value of an output signal from the optical pickup;

a minimum jitter measurement section, which establishes a minimum jitter value from each jitter value measured in response to a successively changed servo constant;

a jitter threshold value setting section, which sets a jitter threshold value by multiplying the minimum jitter value by a prescribed ratio;

a servo constant establishing section, which of jitter values measured in correspondence to a successively changed servo constant, sets at least two jitter values substantially equal to the jitter threshold value, and establishes a servo constant corresponding to the set jitter values; and

an optimum servo constant setting section, which, based on the servo constant corresponding to the minimum of two jitter constants, sets an optimum servo constant.

2. The optical disc apparatus according to claim 1, further

comprising:

a servo constant initialization section, which sets the servo constant to a prescribed initial value; and

wherein the servo constant changing section

5    successively changes a servo constant from the prescribed  
initial value in a direction in which the servo constant is  
increased and in a direction in which the servo constant is  
decreased.

[illegible]

10 3. The optical disc apparatus according to claim 1, wherein  
the servo constant establishing section terminates  
operation of changing the servo constant when the servo  
constant reaches a pre-established value, and

the jitter measurement section terminates operation of  
15 jitter measurement when the jitter value exceeds the jitter  
threshold value a prescribed number of times in a row.

4. The optical disc apparatus according to claim 1, further comprising:

20           a smoothing section, which smoothes dispersion in each  
jitter value measured in correspondence to the successively  
changed servo constant, and

wherein the servo constant establishing section sets  
the at least two jitter values from among each jitter value  
25 after the smoothing.

5. The optical disc apparatus according to claim 1,  
wherein the jitter measurement section measures a  
plurality of jitter values for a single servo constant, and  
of the plurality of jitter values sets a total of each jitter  
5 value after eliminating the maximum value therefrom as a  
jitter value corresponding to the single servo constant.

6. The optical disc apparatus according to claim 1,  
wherein the servo constant changing section sets a  
10 compensation value for the purpose of compensating a level  
of an output signal from the optical pickup as the servo  
constant.

7. A method for servo adjustment of a servo characteristic  
15 in an optical disc apparatus in which a laser beam from an  
optical pickup is shone onto a recording surface of an optical  
disc, and information is read from the optical disc,  
comprising steps of:

successively changing a servo constant;

20 measuring a jitter value of an output signal from the  
optical pickup;

establishing from each jitter value measured in  
correspondence to the successively changed servo constant a  
minimum jitter value;

25 multiplying the minimum jitter value by a prescribed  
ratio and setting a jitter threshold value;

setting at least two jitter values substantially equal to the jitter threshold value from among each jitter value measured in correspondence to the successively changed servo constant and establishing a servo constant corresponding to the set jitter value; and

setting an optimum servo constant based on the servo constant corresponding to the minimum two jitter values.

8. The method for servo adjustment according to claim 7, further comprising steps of:

setting the servo constant to a prescribed initial value; and

successively changing the servo constant from the prescribed initial value in a direction in which the servo constant is increased and in a direction in which the servo constant is decreased.

9. The method for servo adjustment according to claim 7, further comprising steps of:

terminating servo constant changing operation when the servo constant reaches a pre-established value; and

terminating jitter measurement operation when the jitter value exceeds the jitter threshold value a prescribed number of times in a row.

10. The method for servo adjustment according to claim 7,

further comprising steps of:

smoothing dispersion of each jitter value measured in  
correspondence to a successively changed servo constant; and

setting at least two jitter values from among jitter  
5 values after the smoothing.

11. The method for servo adjustment according to claim 7,  
further comprising steps of:

measuring a plurality of jitter values for a single servo  
10 constant; and

setting a total of each jitter value after eliminating  
the maximum value therefrom as a jitter value corresponding  
to the single servo constant.

15 12. The method for servo adjustment according to claim 7,  
further comprising a step of setting a compensation value for  
compensating an output level of an output signal from the  
optical pickup as the servo constant.

20 13. A computer-readable recording medium recording a servo  
adjustment program of a servo characteristic in an optical  
disc apparatus in which a laser beam from an optical pickup  
is shone onto a recording surface of an optical disc, and  
information is read from the optical disc, the servo  
25 adjustment program comprising and conduct a computer execute  
the steps of:

successively changing a servo constant;  
measuring a jitter value of an output signal from the  
optical pickup;

establishing from each jitter value measured in  
5 correspondence to the successively changed servo constant a  
minimum jitter value;

multiplying the minimum jitter value by a prescribed  
ratio and setting a jitter threshold value;

setting at least two jitter values substantially equal  
10 to the jitter threshold value from among each jitter value  
measured in correspondence to the successively changed servo  
constant and establishing a servo constant corresponding to  
the set jitter value; and

setting an optimum servo constant based on the servo  
15 constant corresponding to the minimum two jitter values.

14. The computer-readable recording medium according to  
claim.13, the servo adjustment program further comprising and  
conduct a computer execute the steps of:

20 setting the servo constant to a prescribed initial  
value; and

successively changing the servo constant from the  
prescribed initial value in a direction in which the servo  
constant is increased and in a direction in which the servo  
25 constant is decreased.

15. The computer-readable recording medium according to claim.13, the servo adjustment program further comprising and conduct a computer execute the steps of:

terminating servo constant changing operation when the

5 servo constant reaches a pre-established value; and

terminating jitter measurement operation when the jitter value exceeds the jitter threshold value a prescribed number of times in a row.

10 16. The computer-readable recording medium according to claim.13, the servo adjustment program further comprising and conduct a computer execute the steps of:

smoothing dispersion of each jitter value measured in correspondence to a successively changed servo constant; and

15 setting at least two jitter values from among jitter values after the smoothing.

17. The computer-readable recording medium according to claim.13, the servo adjustment program further comprising and  
20 conduct a computer execute the steps of:

measuring a plurality of jitter values for a single servo constant; and

25 setting a total of each jitter value after eliminating the maximum value therefrom as a jitter value corresponding to the single servo constant.

18. The computer-readable recording medium according to claim.13, the servo adjustment program further comprising and conduct a computer execute the step of: setting a compensation value for compensating an output level of an output signal from the optical pickup as the servo constant.

19. A servo adjustment program of a servo characteristic in an optical disc apparatus in which a laser beam from an optical pickup is shone onto a recording surface of an optical disc, and information is read from the optical disc, comprising and conduct a computer execute the steps of:

successively changing a servo constant;

measuring a jitter value of an output signal from the optical pickup;

establishing from each jitter value measured in correspondence to the successively changed servo constant a minimum jitter value;

multiplying the minimum jitter value by a prescribed ratio and setting a jitter threshold value;

setting at least two jitter values substantially equal to the jitter threshold value from among each jitter value measured in correspondence to the successively changed servo constant and establishing a servo constant corresponding to the set jitter value; and

setting an optimum servo constant based on the servo constant corresponding to the minimum two jitter values.